

**PATENT APPLICATION**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

AIZAWA, MASUO, et al.

Reissue Application of U.S. Patent  
No. 5,879,888 issued on March 9, 1999

Filed: March 8, 2001

For: LUMINESCENCE BY REACTING AN ACRIDINIUM ESTER WITH  
SUPEROXIDE

**PRELIMINARY AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above-identified application as follows:

**IN THE CLAIMS:**

Please cancel claims 4 and 7.

**Please add the following new claims:**

8. A method for emitting chemiluminescence from an acridinium ester in an immunoassay, a hybridization assay or an immunoblot assay, wherein said ester is 4-[2-(succinimzyloxycarbonyl)ethyl]phenyl-10-methylacridinium-9-carboxylate fluorosulfate, comprising reacting at a pH of 6 to 10 said acridinium ester and a superoxide anion produced in situ by electrochemical reduction of oxygen dissolved in an electrolyte using electrodes in the presence of a flavin compound, wherein said

acridinium ester is attached as a label to a reagent in said immunoassay, hybridization assay or immunoblot assay.

9. A method of detecting a substance to be examined in a sample in an immunoassay, hybridization assay or immunoblot assay, comprising, binding a chemiluminescent labeled substance having affinity for said substance to be examined with said substance to be examined in a sample to produce a complex of said substance to be examined and said chemiluminescent labelled substance having affinity therefor; separating said complex; reacting said chemiluminescent label with a superoxide anion at a pH of 6 to 10, said label being a 4-(2-[succinimzyloxycarbonyl)ethyl]phenyl-10-methylacridinium-9-carboxylate fluorosulfate; wherein said superoxide anion is produced in situ by electrochemical reduction of oxygen dissolved in an electrolyte using electrodes in the presence of a flavin compound; and measuring luminescence of said chemiluminescent label to detect said substance to be examined.

REMARKS

Entry and consideration of this Amendment is respectfully requested.

After amendment, the status of the claims is:

Claim 1	Pending, unamended;
Claim 2	Pending, unamended;
Claim 3	Pending, unamended;
Claim 4	Cancelled;
Claim 5	Pending, unamended;
Claim 6	Pending, unamended;
Claim 7	Cancelled;
Claim 8	New; and
Claim 9	New.

New claims 8 and 9 are original claims 4 and 7, rewritten to be independent form. Since new claims 8 and 9 refer to a particular ester, reference to general formula (2) has been removed when rewriting new claims 8 and 9 into independent form. Other than the removal of reference to general formula (2), new claims 8 and 9 do not include any subject matter other than that present in original dependent claims 4 and 7 and independent claims 1 and 5, the independent claims from which original claims 4 and 7 depended.

Rather than amending original claims 4 and 7, new claims 8 and 9 have been presented due to the presence of brackets in original claims 4 and 7.

Applicants respectfully submit that this reissue application is in condition for allowance and allowance is respectfully solicited.

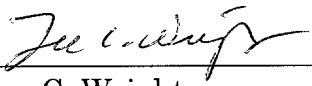
Preliminary Amendment  
Reissue Application of U.S. Patent No. 5,879,888

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee for such extension is to be charged to Deposit Account No. 19-4880.

If any points remain at issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the local exchange number listed below.

Respectfully submitted,

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